CONTROLLING MOTORTRUCK OPERATING COSTS OF FARMER COOPERATIVES

FCS INFORMATION 58 / FARMER COOPERATIVE SERVICE / U.S. DEPARTMENT OF AGRICULTURE

FARMER COOPERATIVE SERVICE
U.S. DEPARTMENT OF AGRICULTURE
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Farmer Cooperative Service conducts research; advises directly with cooperative leaders and others; promotes cooperative organization and development through other Federal and State agencies; and publishes results of its research, issues *News for Farmer Cooperatives,* and other education material.

This work is aimed (1) to help farmers get better prices for their products and reduce operating expenses, (2) to help rural and small-town residents use cooperatives to develop rural resources, (3) to help these cooperatives expand their services and operate more efficiently, and (4) to help all Americans understand the work of these cooperatives.

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This study was made by Farmer Cooperative Service in cooperation with Pennsylvania State University, College of Agriculture, University Park, Pa.

Controlling Motortruck Operating Costs of Farmer Cooperatives

By

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and
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The substantial investment in motortrucks and the high cost of operating and maintaining truck fleets have caused farmer cooperatives and other business firms to seek ways to reduce and control these expenses.

This report suggests procedures and forms cooperatives can use in exercising greater control. Selected farmer cooperatives had participated in the Farmer Cooperative Service study on motortruck operating costs reported in FCS General Report 121, Motortruck Operating Costs of Farmer Cooperatives. In the process of doing the earlier study, we collected the sample forms and statistical data used in this publication.

This publication suggests an organization structure, outlines duties and responsibilities of truck fleet employees, provides procedures for handling repair work, emphasizes preventive maintenance, and gives examples of records and reports to use in controlling costs.

A systematic method of controlling truck costs is presented here to help cooperatives improve the efficiency of their fleet operations. Just as no single accounting system will fit the exact needs of every business enterprise, neither will one truck cost record-keeping system. With some adaptations, however, the suggested forms and procedures could fit the needs of most co-ops and other firms with private truck fleets.

The suggested records, for example, should enable management to establish standards of performance for fleet personnel and equipment and to measure results and costs against such standards. But the larger firms may wish to do this on the basis of drivers, vehicles, and scheduled runs on each route. They also may wish to keep maintenance costs for major truck components such as engines, transmissions, electrical systems and bodies to help control costs and establish truck specifications for the job to be done.

Organization Structure

Most firms find it necessary to develop their own organization structure and system of accounting to fulfill their particular requirements for management information and control. A sound organization structure is basic for accomplishing the desired objectives. It provides logical and understandable areas of responsibilities and duties from the top executive down to the individual worker.

Without an organization chart showing various divisions and departments and a written description of each job, it is impossible to hold individual persons responsible because their duties are not sufficiently defined.

A fleet of trucks in a firm normally should be under the direction of a motor vehicle section in a traffic or transportation department. An example of how it might appear on an organization chart appears in figure 1.

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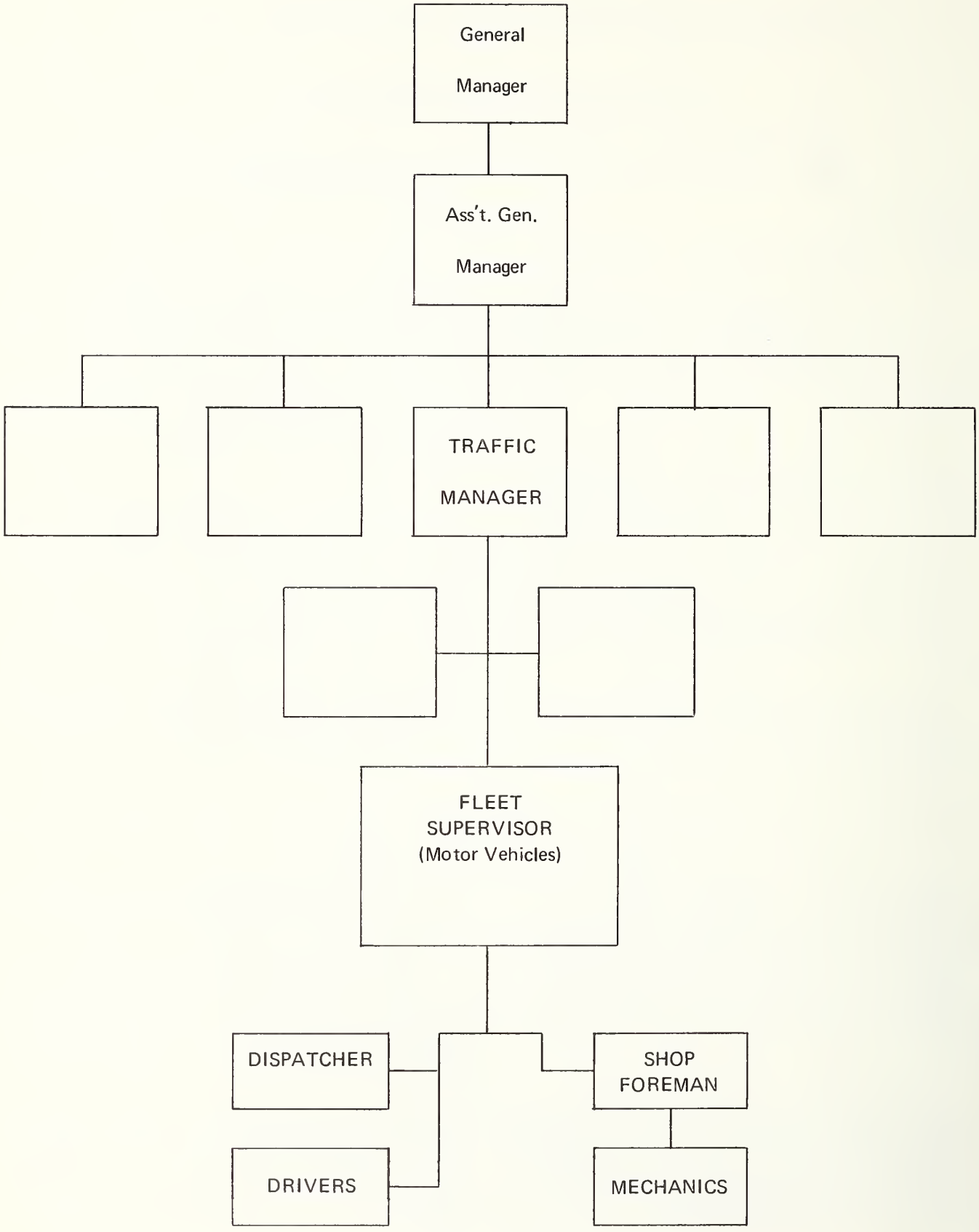
Figure 1.—Suggested Organization Chart Showing Motor Vehicle Section in a Traffic Department



Every person in the Motor Vehicle Section should know what he is responsible for, to whom he is responsible, what authority he has to act on his own volition, and to whom he must go for additional authority. Each person's responsibility and authority should be defined in a job description clearly outlining his job.

The organization chart shows the levels of authority and lines of communication. Management should make clear that the channel established is the line of authority to be followed. In this way personnel will not become confused as to whom they are responsible. As the business grows and becomes more complex, staff personnel may be added to provide technical help and guidance.

A good organizational structure provides the basis for accounting and reporting at basic supervisory levels. A responsibility accounting and reporting system should be developed to help management control costs at the levels they originate and are initially approved. It should indicate limitations and measure actions taken at that specific level, the costs incurred, and results achieved.

Responsibility reporting also is essential to budgetary control of operations. It involves performance measurements in which actual results are compared with predetermined standards. Proper design of forms and records for management reports thus should at least provide a breakdown of data necessary to effectively evaluate the performance and operating costs of individual trucks in the fleet.

Duties and Responsiblities

All employees working with a truck fleet in a motor vehicle section should clearly understand their duties and responsibilities if the operation is to function smoothly. No single list of basic functions and responsibilities will be appropriate at all times and under all circumstances for fleet control purposes. The guidelines listed in this section can be modified to suit objectives and changing conditions of individual firms.

Fleet Supervisor

A Fleet Supervisor is responsible for developing rules and regulations to conform with general policies of the firm that cover supervising the operation and maintenance of the truck fleet. The supervisor performs the following specific duties and has these responsibilities:

1. Plans, directs, and controls the activities of subordinate supervisory and nonsupervisory personnel, such as Shop Foreman, Dispatcher, and Drivers. Also, assists in selecting and training qualified personnel to develop an efficient functioning personnel force.

2. Provides the necessary equipment at the time and place it is needed.

3. Reviews the Vehicle History Folder periodically to identify those units with repeats of malfunctions and requiring special attention.

4. Operates the preventive maintenance control center. Plans and schedules all preventive maintenance inspections and notifies the Dispatcher in advance of specific vehicles due normal and special preventive maintenance inspections.

5. Determines whether trucks, or major parts, should be repaired or replaced, and approves purchase requests for major parts.

6. Formulates rules necessary for the efficient functioning, and enforcing of fleet maintenance and repair operations, and:

a. Prepares and maintains repair orders, truck and trailer history files, plus other records and reports in connection with fleet and garage activities.

b. Budgets and reviews company garage operating costs, and takes remedial measures where costs appear excessive.

c. Computes hours worked and wages earned for hourly paid mechanics, plus parts supplied and costs incurred for servicing company trucks.

d. Keeps informed regarding latest developments and improvements, as well as mechanical service procedures, on the power units and trailers his shop maintains.

Dispatcher

The Dispatcher is responsible for scheduling trucks to provide adequate service in the most efficient manner. He does the following:

1. Verifies and controls all driver expenses incurred on the road and ensures that drivers follow rules laid down by the Fleet Supervisor relative to authorized service stops and expense limitations.

2. Schedules deliveries and pickups of company purchased supplies or raw materials.

3. Determines proper loading sequence of orders.

4. Determines best possible utilization of each vehicle.

5. Assigns drivers and helpers to unassigned runs or routes in emergencies.

6. Evaluates the performance of each driver.

7. Collects Daily Inspection/Trip Report from drivers on completion of their tour of duty and verifies completeness of reports in drivers presence. These reports should be given to the Fleet Supervisor before leaving the plant.

Driver

In general, the Driver is responsible for driving the truck in accordance with instructions of the Dispatcher. He is responsible for the condition of the equipment and the safe and careful handling of the cargo. He has the following specific duties and responsibilities:

1. Performs a safety inspection of the vehicle before departure to see that the unit has flares, flags, fire extinguisher, and other safety equipment in compliance with all State and Federal regulations.

2. Complies with Interstate Commerce Commission and State rules and regulations as well as safety laws.

3. Reports necessary repairs or adjustments to the Dispatcher on completion of his initial inspection, or at the end of each run on Vehicle Repair Request Form.

4. Completes and signs the Daily Inspection/Trip Report after completion of normal driving activities, in accordance with instructions.

5. Reports any breakdown on the road to the Fleet Supervisor or Dispatcher for instructions.

6. Dresses neatly and performs in a courteous manner.

Shop Foreman

The Shop Foreman is responsible for managing the shop which services, inspects, and repairs company power units and trailers. This means, he does the following:

1. Plans, assigns, and supervises work of shop employees.

a. Schedules the workload, inspects work in progress, and notifies Dispatcher of all vehicles returned to duty after repair work has been completed and inspected.

b. Maintains and controls a predetermined level of parts and supplies most often used.

c. Coordinates, with the Dispatcher, all major vehicle repairs in order to minimize service interruptions.

d. Prepares and submits cost estimates to Fleet Supervisor in connection with major repair work or overhaul.

e. Authorizes certain undetected and necessary vehicle repairs not specified on the Repair Order.

2. Offers technical advice and assistance in the more involved service requirements by:

a. Giving instructions on the correct maintenance of company equipment.

b. Providing mechanics with the necessary tools for their work.

3. Assists in selecting and training qualified mechanics and other service employees to develop an efficient work force.

4. Prepares Daily Garage Reports in accordance with established procedures. (From Misc. Shop Tickets.)

5. Forwards Daily Fuel and Oil Reports to Fleet Supervisor on a periodic basis.

Mechanic or Serviceman

The Mechanic or Serviceman is responsible for repairing or inspecting vehicles assigned by the Shop Foreman. He does the following:

1. Advises Shop Foreman on extent of repairs necessary.

2. Repairs and inspects power units and trailers.

3. Keeps the work area clean at all times.

Shop Clerk or Stock Clerk

The Shop or Stock Clerk is responsible for clerical work associated with parts and supplies routinely used in the fleet servicing program. He does the following:

1. Issues parts and supplies to authorized personnel only and records disbursements on bin cards.

2. Prepares Daily Stock Report in accordance with established procedures.

3. Performs related work as assigned by Shop Foreman.

Maintenance Cost Control Procedures

This section presents steps and forms or records needed to ensure a well-organized repair service for motortrucks. One set of procedures and forms are designed for repair work done in a firm's own garage with a stockroom and a Shop Clerk. Another section covers procedures for obtaining parts for inventory or the stockroom.

Conducting Work in a Firm's Own Garage

Procedures and forms cover two phases of repair work: (1) Initiating and conducting the repair work; and (2) checking the work and completing the records after the job is done.

In the Repairing Process–

1. Driver files a Vehicle Repair Request with his Daily Inspection/Trip Report (figure 2).

2. Fleet Supervisor carefully reviews the Vehicle History Folder before any repairs are authorized. He then does the following:

a. Prepares Repair Order (original and 2 copies), with the Vehicle Repair Request attached, which are then sent to the company garage. This same procedure is followed when major repairs are to be done by an outside garage. Repair Order is still used.

b. Authorizes all work in the original Repair Order instruction column.

c. Initials immediately below his instructions. Authorization for any additional work must be followed by date, time, and initials of authorizing person.

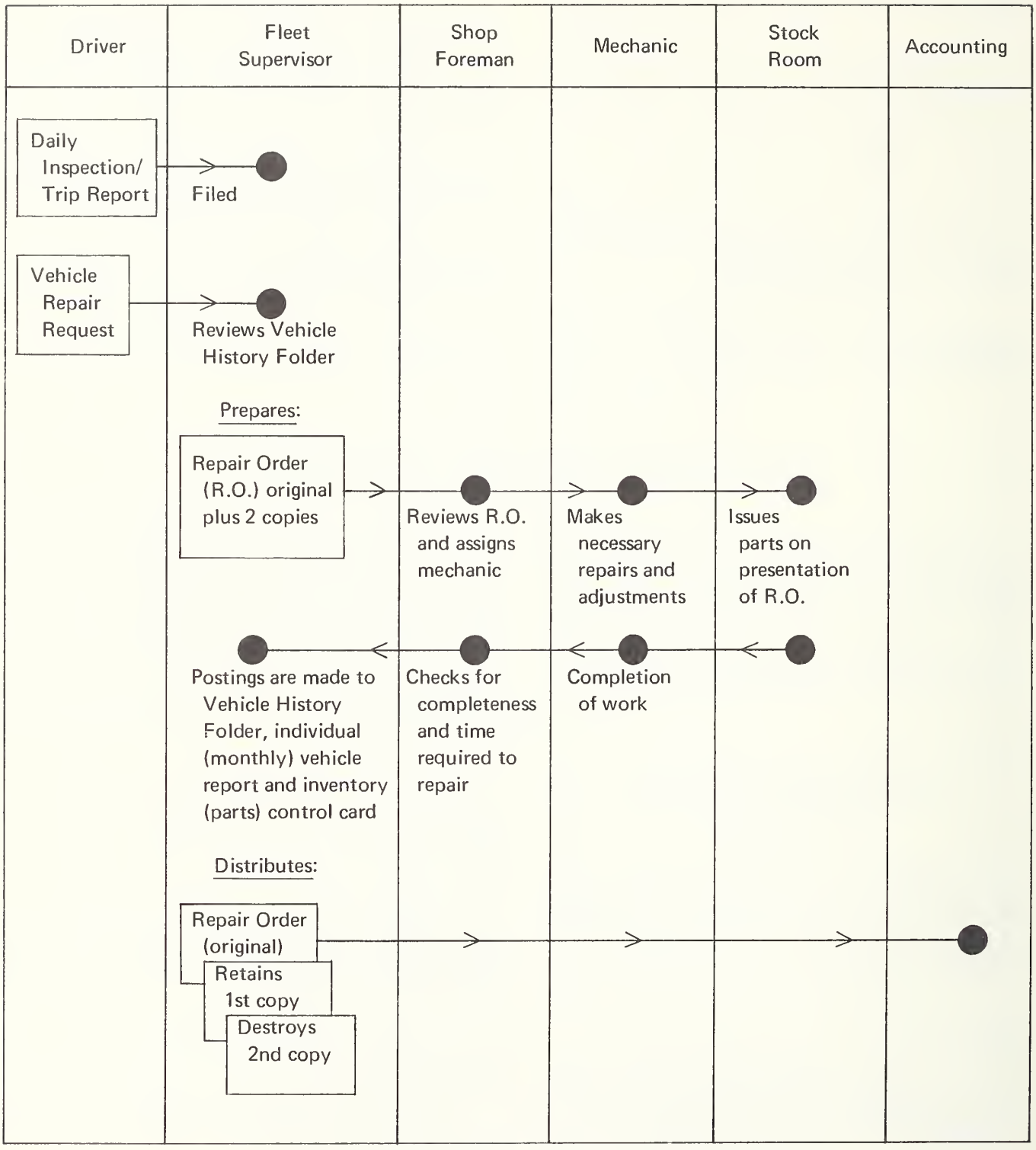
d. Calls to attention of Shop Foreman all repeat repair work on repairs under manufacturers and outside garage warranties.

3. Shop Foreman assigns mechanic or mechanics to each job.

4. Mechanic takes Repair Order to stockroom when parts are required.

5. Shop Clerk issues necessary parts on presentation of Repair Order by the mechanic.

Figure 2.—Flow Process of a Repair Order



a. To eliminate pilferage, the mechanic signs for all parts which he has drawn from the stockroom on the Daily Stock Report.

b. Shop Clerk fills in part number, quantity, description, and price of each article obtained (requested) by mechanic.

c. If some parts were not used that have been charged to particular job (vehicle), they should be returned to the stockroom. The Shop Clerk makes all corrections on the Repair Order by drawing a single line through the entire section of article being returned and then showing on a new line the number of articles used, parts number, description, and price. Initials of person making correction should also be shown.

On Completion of Repair Work–

1. Mechanic–

a. Shows time each individual job is begun and completed.

b. Returns parts to stockroom (see instructions in 5c above).

c. Returns Repair Order to the Shop Foreman.

2. Shop Foreman–

a. Completes his section of Repair Order for elapsed time.

b. Checks to determine that all work was performed according to instructions on Repair Order.

c. Forwards Repair Order to the Fleet Supervisor.

3. Fleet Supervisor–

a. Checks all extensions and totals for correctness and then makes distribution of Repair Order as follows:

(1) Original is forwarded to Accounting.

(2) First copy (yellow) retained by Fleet Supervisor. All pertinent information is recorded on the Truck History Folder. Maintenance and repair costs are also recorded on the (monthly) individual Motor Vehicle Cost Record. All costs incurred by driver, reported on the drivers Daily Inspection/Trip Report are recorded on the Motor Vehicle Cost Record.

After all postings have been made, the Repair Order (yellow copy) is placed in the Truck History Folder.

(3) Second copy (hard) together with the Driver's Vehicle Repair Request may be destroyed.

Obtaining Parts for Inventory

Figure 3 illustrates the procedure for ordering and controlling parts for inventory at a predetermined level.

Shop Foreman does the following–

1. Initiates Purchase Request for those parts most often used and inventoried (original and 1 copy).

2. Disposes of Purchase Request as follows.

a. Original goes to Purchasing Department. Purchases above a predetermined amount should be approved by Fleet Supervisor.

b. Second copy filed.

Purchasing Department's employee–

1. Initiates Purchase Order for requested parts (original and 3 copies).

2. Disposes of Purchase Order:

a. Original goes to company supplying the parts.

b. First copy to Receiving.

c. Second copy to Shop Foreman.

d. Third copy retained by Purchasing Department.

Receiving Department personnel–

1. Receives and matches Purchase Order with Delivery Receipt.

2. Signs supplier Delivery Receipt. Issues a Receiving Report. (Original and 2 copies.)

3. Disposes of Receiving Report as follows:

a. Original to Purchasing Department showing quantity and condition of complete order.

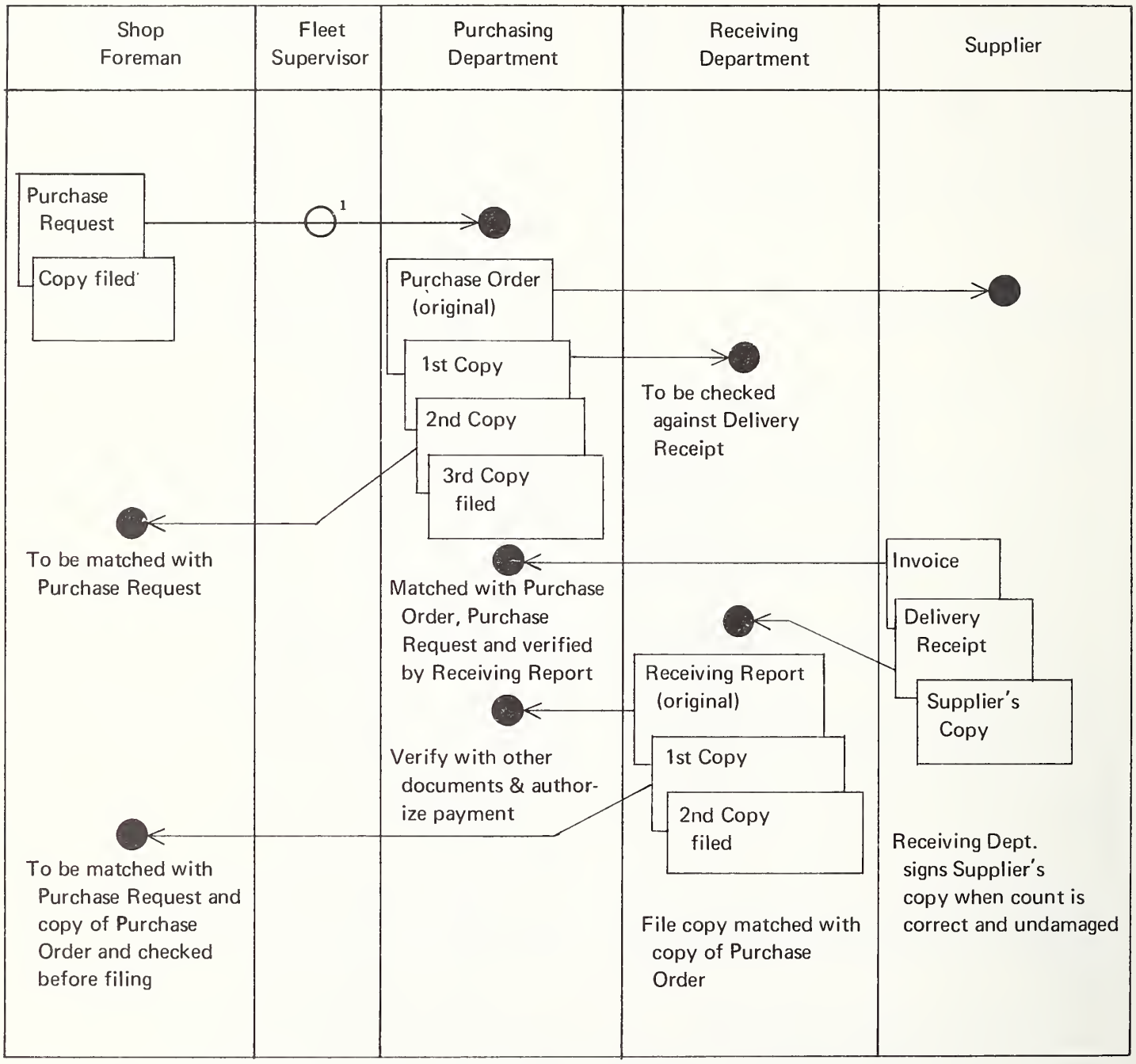
b. First copy to Shop Foreman.

c. Second copy filed with Supplier's Delivery Receipt and Purchase Order.

Supplier–

1. Sends invoice to Purchasing Department.

Figure 3.—Flow Process for Ordering and Controlling Parts for Inventory at a Predetermined Level



[1] Approval of Fleet Supervisor is required only if the purchases are above a predetermined amount.

Preventive Maintenance

The objectives of a preventive maintenance program are to assure vehicle safety, prevent road failures, extend the life of various components, and reduce maintenance costs. The preventive maintenance procedures include lubrication operations, inspections, and minor adjustments at intervals in keeping with the type of vehicle operation.

The effectiveness of the program depends on several factors, all of about equal importance.

1. The program must have management support and must be competently supervised.

2. Lubrication and inspection operations must be performed thoroughly and by qualified personnel.

3. Adjustments, repairs, and parts replacements must be made promptly by qualified mechanics to obtain maximum benefits.

4. Records of inspections and repairs must be current.

5. Analysis of records and reports must be made and corrective action taken where indicated.

A visual device or control center, pictured in accompanying photograph, may help to regulate the orderly flow of work in and out of the shop. The preventive maintenance control center identifies each vehicle to be inspected, the date due, and the type of inspection to be performed. The control center provides visual surveillance of preventive maintenance activities.

A file card is prepared for each vehicle listing vehicle number, model, year, oil capacity, grade, filter number, and any other pertinent service information. The Fleet Supervisor assigns the completed file card to a slot in the Preventive Maintenance (PM) Control Center. Several days before the inspection is due, he notifies the Dispatcher and Shop Foreman who then schedule the vehicle for the shop. An inspection is not a repair. A sound P.M. inspection will be defeated if repairs are made while inspecting the vehicle. One suggestion is that inspection procedures be followed as advocated by the truck manufacturers. Any defects found during the inspection should be recorded on a Repair Order and the vehicle scheduled for the garage.

Visual device on control center for regulating flow of work in and out of shop.

After inspection has been completed, the file card is replaced in a slot designating the next inspection date. Colored paper stock should be attached to those vehicle cards to indicate other than the routine A inspection. An example is shown in the adjoining column.

The time interval between scheduled inspections, for example, from A inspection to B inspection, or B to C inspection, will depend largely on the type and use of vehicular equipment. The intervals are usually set up on a time and mileage basis to provide more flexible application of the inspections. The truck manufacturer's recommendations should be used as a guide to effective interval determination.

Type inspection	Color stock	Hours usually required
A	White	1
B	Green	5
C	Red	10

Records And Forms

This section discusses and illustrates records and forms essential for controlling truck fleet operations, maintenance, and costs. Although a record system will never maintain a truck, a competent analysis of truck records can help management determine the adequacy of the fleet budget, the repetitiveness and frequency of maintenance, and the proper selection of replacement vehicles.

Truck History Folder

Before any work is authorized, the Fleet Supervisor reviews the History Folder to determine if the current complaint is chronic or if maintenance has been performed at proper intervals.

The cover of the History Folder identifies the vehicle, codes the work performed by components (which match the Repair Order codes), and provides additional information on dates, repair order numbers, mileage, and a brief description of the work done (see form 1). Completed Repair Orders, Vehicle Repair Requests, and other pertinent data are contained inside the History Folder.

Information entered on the History Folder Cover shown in form 1 should be taken directly from the completed Repair Order. The History Folder also contains records of preventive maintenance inspections.[2]

[2]The General Motors Corporation granted permission to reproduce the Truck History Folder and Repair Order illustrated in this report.

Repair Order

The Repair Order should be the most useful maintenance control form. Information contained on the Repair Order form is of value to the Shop Foreman, the Mechanic, the Shop Clerk, the Accounting Department and to top management (form 2). The Repair Order Form is designed to complement the History Folder. Both forms contain similar component codes and in the same order.

The Repair Order provides written instruction to the mechanic, and authorizes the Shop Clerk to issue needed parts. Parts and labor costs for each segment of repair are recorded.

The Order provides a continuous check against shop efficiency, provides a means to check reasons for shop comeback, and acts as a complete billing for labor/materials against a specific vehicle for use by the Accounting Department. The Repair Order also provides the necessary information for the Fleet Supervisor's analysis of individual vehicle performance.

Following are instructions for using the Repair Order:

1. Fleet Supervisor enters the appropriate information in the heading section of Repair Order.

2. Fleet Supervisor writes up the instruction to the shop, using code number that best describes the component being repaired. Put a check mark in the proper component box in the coding section. Distribute Repair Order to shop.

Form 1.–TRUCK HISTORY FOLDER COVER

TRUCK FLEET NO. ______________

MAKE	YEAR	STARTER	FLEET NO.
MODEL	TRANS. MAIN	TRANS. AUX.	
AXLE FRONT	AXLE REAR	GENERATOR	
CLUTCH	ENGINE		
BATTERY			

Column headings (diagonal): ROAD CALL, LUBE & P.M., ELECTRICAL, IGNITION SYSTEM, ENGINE INCL. MTG., FUEL SYSTEM, COOLING & HEATER SYSTEM, FRONT AXLE, REAR AXLE, CAB & SHEET METAL, BODY - TRUCK OR TRAILER, BRAKES, AIR OR HYDRAULIC SYSTEM, INSTRUMENTS, CLUTCH & CONTROLS, FRAME (CHASSIS), SUSPENSION SYSTEM, EXHAUST SYSTEM, STEERING, TRANSMISSION, DRIVE LINE, WHEELS & HUBS, FIFTH WHEEL & MTG., REFRIGERATION, ACCIDENT, LIFT TRUCKS

DATE	R.O. NO.	MILEAGE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	DESCRIPTION

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Form 2.–REPAIR ORDER

FLEET NO.

MAKE

MODEL

YEAR

SER NO

R.O. WRITTEN BY

MILEAGE

FOREMAN'S O K

RECORDED ON FOLDER ☐

TOTAL HOURS	MECH.	UNIT CODE	INSTRUCTIONS

TOTAL HOURS →

STOCK ROOM MATERIAL

QTY.	PART NO	DESCRIPTION	PARTS CODE	PRICE EACH	EXTENDED AMOUNT
			TOTAL PARTS →		

CODE	PARTS	LABOR	DESCRIP.	X
01			ROAD CALL	
02			LUBE & P.M.	
03			ELECTRICAL	
04			IGNITION SYSTEM	
05			ENGINE INCL. MTG.	
06			FUEL SYSTEM	
07			COOLING & HEATER SYSTEM	
08			FRONT AXLE	
09			REAR AXLE	
10			CAB & SHEET METAL	
11			BODY-TRUCK OR TRAILER	
12			BRAKES	
13			AIR OR HYDRAULIC SYSTEM	
14			INSTRUMENTS	
15			CLUTCH & CONTROLS	
16			FRAME (CHASSIS)	
17			SUSPENSION SYSTEM	
18			EXHAUST SYSTEM	
19			STEERING	
20			TRANSMISSION	
21			DRIVE LINE	
22			WHEELS & HUBS	
23			FIFTH WHEEL & MTG.	
24			REFRIGERATION	
25				
26			ACCIDENT	
27				
28			LIFT TRUCKS	
TOTAL LABOR →				

FORM GMC-134

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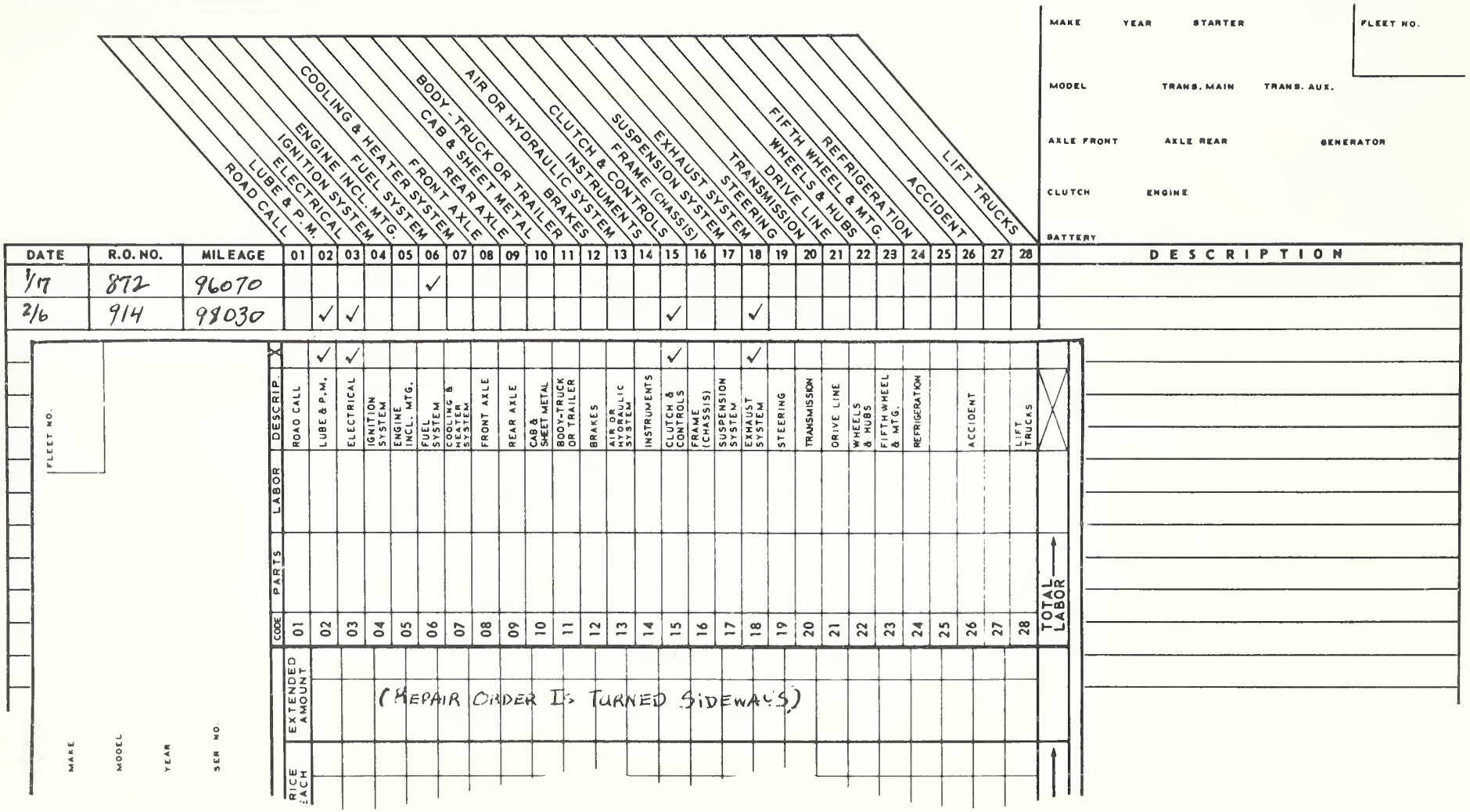
Figure 4. Illustration of Transcribing Completed Repair Order to Vehicle History Folder



3. As repairs are completed, the Mechanic should enter his name and the time required for the job, next to the work done. The Shop Clerk completes the stockroom section as parts are issued.

4. When all repairs are completed, the Shop Foreman totals the parts and labor costs and enters totals in the proper coding area spaces.

5. The Fleet Supervisor or someone under his direction, transposes the date, Repair Order number, and mileage from the Repair Order on the next empty line of the Truck History Folder.

The Repair Order should be turned sideways, so that the lines in the coding section match the lines of the History Folder's coding areas (see figure 4). Merely transfer the check marks to the History Folder. This way repeated trouble will soon become obvious as a line of checks appear under a given component.

All labor and parts costs can be coded for data processing to pinpoint maintenance costs and service personnel responsibility by truck component.

Miscellaneous Shop Ticket

This form is used only in connection with Vehicle Repair Request when a Repair Order is not issued. Repair Orders would not be written for any labor, time, or parts for less than a predetermined amount.

Books of these can be made and issued to each mechanic. The completed tickets are submitted to the Shop Foreman for his use in preparing the Daily Garage Report. These tickets can be retained by Shop Foreman for a period of time or destroyed.

The accompanying form 3 can be used by the mechanic for reporting labor and parts cost to vehicles not covered by a Repair Order.

Motor Vehicle Cost Record

The Motor Vehicle Cost Record provides continuous individual vehicle cost and performance information (form 4). The data required include operating costs (direct, fixed, and indirect) and other data such as number of miles traveled, units delivered, number of trips, and stops made. Each Motor Vehicle Cost Record is prepared and summarized by the Fleet Supervisor and the results grouped according to similar type vehicles.

Direct operating costs vary directly with vehicle miles traveled and units delivered, for example; drivers wages, fuel, oil, maintenance, body, tires, and refrigeration. The direct vehicle operating costs are obtained from the Daily Driver Report, Repair Order, Fuel & Oil Report, and Garage Report.

Fixed costs are directly assignable to individual vehicles but do not vary with vehicle and units delivered. Fixed costs include depreciation, taxes, licenses, permits, insurance, and interest on investment.

Form 3.–MISCELLANEOUS SHOP TICKET

Vehicle No. _____ Date _____

Labor		Parts				Code number
Time	Cost	Quantity	Part #	Description	Price	

Mechanic initials _____ Total $ _____

FORM 4. **MOTOR VEHICLE COST RECORD**

MONTH AND YEAR

DATE PURCHASED

COMPLETE COST $

TRACTOR-FLEET NUMBER

LICENSE NUMBER

DAY OF MO.	MILES DRIVEN	UNITS HAULED 1/		MOVEMENTS		FUEL				OIL		MAINTENANCE		TIRES & TUBES		REFRIGERATION		BODY		OTHER DIRECT COSTS 2/	DRIVER AND HELPERS		TOTAL DIRECT OPERATING COSTS	DAY OF MO.
						AT PLANT		OTHER																
		DELIVERED	BACKHAULS	TRIPS	STOPS	GALS	COST	GALS	COST	QTS	COST	LABOR	PARTS	NEW	REPAIR	LABOR	PARTS	LABOR	PARTS		HRS	COSTS		
1																								1
2																								2
3																								3
4																								4
5																								5
6																								6
7																								7
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28																								28
29																								29
30																								30
31																								31
TOTAL																								

MILES TO DATE _____

OPERATING COST TO DATE $_____

PER MILE COST TO DATE $_____

PER UNIT COST TO DATE $_____

MILES FOR MONTH _____

PER MILE COST FOR MONTH $_____

PER UNIT COST FOR MONTH $_____

DIRECT OPERATING COSTS $_____

ASSIGNED VEHICLE COSTS:

FIXED COSTS 3/ _____

INDIRECT COSTS 4/ _____

TOTAL OPERATING COSTS FOR MONTH $_____

1/ Units are defined as tons, bushels, cartons, gallons, or hundredweight.

2/ Cost directly chargeable to individual vehicles which vary directly with vehicles miles traveled and tonnage hauled, such as over-the-road expenses of drivers and road services.

3/ Cost directly chargeable to individual vehicles which do not vary with vehicles miles traveled and tonnage hauled, such as depreciation, taxes, licenses, permits, insurance, and interest on investment.

4/ Certain specified general expenses for the cooperative as a whole, not directly chargeable to individual vehicles and allocated on a predetermined basis. These include fringe benefits, utilities, office and garage supplies, garage rental, and traffic or transportation management expenses.

Indirect costs are certain specific general overhead and administrative expenses for the firm as a whole which are assigned equitably to all vehicles. Such costs are traffic and transportation management, related fringe benefits, utilities, office and garage supplies and equipment, garage rental, and miscellaneous expenses. Indirect costs should be furnished by the Accounting Department.

The Motor Vehicle Cost Record is kept by the Fleet Supervisor.

Trailer Work Order

The Driver files a Trailer Work Order at the end of a run or trip to correct any problems encountered during operations (form 5). The Fleet Supervisor files such an order when preventive maintenance inspections or Repair work is due.

Trailer Cost Record

A Trailer Cost Record is maintained for each trailer (form 6). The trailer operating cost data are obtained from Repair Orders and recorded at the time costs are incurred. All preventive maintenance expenses and repairs to refrigerating units are included in the Trailer Cost Record.

The Fleet Supervisor shall be responsible for maintaining and analyzing the Trailer Cost Record as determined by company policy.

Individual Tire Record

Use this form to record information pertaining to each individual tire (form 7). The information will relate to such items as: The date when the tire is put on and taken off a particular vehicle, odometer or hubometer readings of the vehicle when the tire is put on and taken off, elapsed mileage, initial tire value, miscellaneous tire value, miscellaneous tire expense, and replacement cost (new) or retreading cost.

As a clarifying point:

> odometer, an instrument in the speedometer for measuring distances;
>
> hubometer, an instrument in the hub of the wheel for measuring distances.

The purpose of this form is to obtain a basis for the determination of tire costs related to mileage by the vehicle using the tire. The annual tire costs will be allocated among using equipment.

Column Entries

Most of form 7 is self-explanatory, but here is the information to be included under four of the column entries:

"Tire No." - Enter the identifying number (all or part of the manufacturer's serial number, or the carrier's own number or mark) for each tire put on or taken off a vehicle.

"Elapsed Mileage" - To arrive at this figure, subtract the "odometer on" from the "odometer off" reading.

"Initial Tire Value" - The amount paid for the tire.

Form 5.—TRAILER WORK ORDER

(For periodic preventive maintenance inspection)

Warehouse _____ Date _____

Wheel bearings and brake drums to be inspected on a predetermined mileage basis

Trailer number	Lubricate chassis	Lubricate landing assembly	Drain air tank	Check door and fasteners	Check kingpin and plate	Check wheel nuts	Check tires & valve caps	Check brakes and air lines	Check all lights

Comments: _____

_____

In lieu of the above inspection the Manufacturers' suggested preventive maintenance program for trailers and refrigeration units may be adopted.

_____

_____

_____

Inspector's signature

FORM 6. TRAILER COST RECORD

PERIOD FROM: _____

TO: _____ 19 ____

DATE PURCHASED:

COST

TRAILER NO

LICENSE NO

DATE	NORMAL INSPECTION		TIRES & TUBES		BODY		TRAILER MAINTENANCE COSTS	MECHANICAL REFRIGERATION UNIT				REFRIGERATION MAINTENANCE COSTS	TOTAL COSTS
								NORMAL P M		REPAIRS			
	HOURS	COST	NEW	REPAIR	LABOR	MATERIAL		LABOR	PARTS	LABOR	PARTS		
TOTAL													

Interest on investment $_____

Insurance _____

Tax and License _____

Depreciation _____

Total Cost $_____

Form 7.—INDIVIDUAL TIRE RECORD

Company _____

Tire No.	Make of Tire	Size of Tire	No. of Ply

Date tire put on: _____

Vehicle No.: _____

Odometer reading on: _____ mi.

Date tire taken off: _____

Odometer reading off: _____ mi.

Elapsed mileage: _____ mi.

Initial tire value: $ _____

Miscellaneous tire cost

(repairs, tubes, etc.): $ _____

Replacement cost new: $ _____

Retreading cost: $ _____

Reports

The Interstate Commerce Commission (ICC) requires that truck drivers, driving beyond a 50-mile radius of the garage or terminal at which he reports for work, maintain a daily log (Form BMC-59), according to the digest of the ICC Motor Carrier Safety Regulations, §195.8 (b).

Driver's Daily Inspection Report

Before starting out on a trip, the various Mechanical Inspection items in the Daily Inspection Report should be checked to ensure that they are in good working order (form 8). This report is used in conjunction with either the inter- or intrastate trip report forms.

Any defect likely to cause an accident or breakdown must be corrected before the vehicle is placed in service. Should the driver discover that the vehicle in service is in an unsafe condition, he should continue to the nearest place where repairs can be made. This should only be done if it is less hazardous to the public than permitting the vehicle to remain on the highway.

The required emergency equipment should be readily available for immediate use. Always use this equipment as needed and report or replace those items when used.

Drivers operating more than one vehicle must submit a written report, on each vehicle operated, at the end of their tour of duty. The report should indicate satisfactory condition of the vehicle or listing any observed defect that is likely to cause an accident or breakdown.

It is the responsibility of the driver to see that minor replacements, for example, light bulbs, wiper blades, and fuses, are made by a mechanic or himself prior to departure. Minor replacements made by the driver will be reported on the Daily Inspection/Trip Report. Replacements made by a mechanic will be reported on the Miscellaneous Shop Ticket.

Trip Reports

An Interstate Trip Report (form 9) covering mileage between States, or an Intrastate Trip Report (form 10) covering operations within a State, should be used depending upon the type of hauling to be done. The Trip Report is the drivers progress report, to be completed as events occur, for example, driver will note and record odometer reading when entering and leaving terminals and States.

It is important that the driver record the time when he, his helper, or anyone else begins to load or unload his vehicle. Each driver is responsible for the completeness of this report on each truck operated by him on his tour of duty. The report should be filled out in an accurate and legible manner.

Total all columns. Make sure that total mileage driven, agrees with breakdown of mileage. Weight of deliveries plus the weight of nondelivered product should equal the total outbound weight.

The completed Daily Inspection and Trip Report is turned in to the Dispatcher who forwards it to the Fleet Supervisor for posting to the Motor Vehicle Cost Record.

Driver's Vehicle Repair Request

A Driver's Vehicle Repair Request is always initialed by the driver to call attention to defects other than minor replacements that have been observed during initial inspection of the truck or discovered while driving (form 11). No vehicle should be operated that is unsafe. Completed Vehicle Repair Requests are ultimately filed in the Truck History Folder.

Daily Stock Report

The Daily Stock Report is a running report prepared by the Shop Clerk as parts are issued (form 12). This report is submitted to the Shop Foreman as required by him.

Form 8.–DAILY INSPECTION REPORT

Date_____ 19___

Driver:_____ Truck or Tractor No.: _____

Driver's helper: _____ Trailer No.: _____

Mechanical Inspection

Note: Inspect each item and check (✓) only those that function or are accounted for:

	OK	Not	Replaced or repaired[1]
Battery and starter	( )	( )	_____
Engine	( )	( )	_____
Radiator	( )	( )	_____
Clutch	( )	( )	_____
Transmission	( )	( )	_____
Rear axle	( )	( )	_____
Instruments	( )	( )	_____
Steering	( )	( )	_____
Brakes	( )	( )	_____
Lights	( )	( )	_____
Reflectors	( )	( )	_____
Wipers & mirrors	( )	( )	_____
Fuses, flares & flags	( )	( )	_____
Jacks & tools	( )	( )	_____
Extinguisher	( )	( )	_____
Refrigeration unit	( )	( )	_____
Tires and wheels	( )	( )	_____

Remarks _____

_____

_____

_____

[1]Person making replacement or repairs must initial after performing that service.

FORM 9. INTERSTATE TRIP REPORT
Over-The-Road Mileage Record Between States

	TOTAL	STATES OF OPERATION			ROUTES USED
		VIRGINIA	MARYLAND	PENNSYLVANIA	
OUTGOING TRIP					
Odometer reading:					
Leaving state					
Beginning 1/					
TOTAL MILES					
RETURN TRIP					
Odometer reading					
Leaving state					
Beginning					
TOTAL MILES					
GRAND TOTAL					

DRIVING, LOADING, AND UNLOADING TIME RECORD

LEFT	TIME	A	P	ARRIVE	TIME	A	P	HOURS
START LOADING OR UNLOADING	TIME	A	P	FINISH LOADING OR UNLOADING	TIME	A	P	HOURS

Pickups or deliveries not made, why? _____

_____

Weight of Product hauled on return trip _____ (lbs)

Total time _____

Less loading and unloading time _____

Total driving time _____

EXPENSES 2/

ITEM	PHONE	TOLLS	MEALS	LODGING	WEIGHING	LOADING	FUEL	OTHER	TOTAL
AMOUNT									

REMARKS: _____

_____

_____ _____

(Signature of Driver) *(Date)*

1/ *Beginning mileage has a double meaning in this instance: (1) The odometer reading at the terminal or home base from which the driver is to depart and (2) the odometer reading at the time he enters another state which then becomes the ending mileage in the state he is leaving.*

2/ *Receipts for expenses must be attached. (These items should be charged on a vehicle credit card, with a signed copy attached to this report).*

Form 10.—INTRASTATE TRIP REPORT

(Mileage, time, and expense records within a State)

Odometer reading end: _____ Time: Arrive plant _____

Odometer reading begin: _____ Leave plant _____

Total miles: _____ Total elapsed time _____

Start loading or unloading	Time	A	P	Finish loading or unloading	Time	A	P	Weight of product	
								Loaded	Unloaded

Pickup or deliveries not made, why? _____

_____

Product weight picked up for return trip _____ pounds.

Expenses[1]	Amount
Telephone	$ _____
Tolls	_____
Loading/unloading	_____
Weighing	_____
Fuel	_____
Total	$ _____

Emergency road call: _____

_____

_____

_____

_____

_____

_____

Remarks: _____

_____

_____ _____

Date Signature

[1] Receipts for expenses must be attached. These items should be charged on a vehicle credit card, with a signed copy attached to this report.

Form 11.–DRIVER'S VEHICLE REPAIR REQUEST

Instructions: Circle faults such as engine stalls under Code No. 05.[1]

Name of Driver: _____ Vehicle No. _____

Code No.

01 Road call
02 Lube & preventive maintenance
03 Electrical: Lights - Head Tail Dash Dome Clearance Park
Turn signals - Do not cancel Inoperative
04 Ignition system
05 Engine: Noise Stalls Smoke Timing Power Rough Starter
06 Fuel System: Flood Fast idle Fuel Leak
07 Cooling & heating system: Hoses Leaks Overheating Anti-freeze
08 Front axle - Noisy
09 Rear axle - Noisy Controls Shift trouble
10 Cab & sheet metal Right door Left door Hood Cab
11 Body - truck or trailer - Noisy Loose Damaged Glass
12 Brakes - Pull Grab Soft Adjust Noisy
13 Air or Hydraulic system
14 Instruments - Speedometer Oil gauge Temp. gauge Charge indicator
15 Clutch & controls
16 Frame (chassis)
17 Suspension system - Noisy Weak Shackles Front Rear
(Springs & shocks)
18 Exhaust system - Leaks Loose
19 Steering - Loose Wanders Pull Shimmy
20 Transmission:
Manual - Noisy Rough Jumps out of gear
Automatic - Noisy Slippage Shift pattern
21 Drive line
22 Wheels & hubs - Bent Lugs
23 Fifth Wheel
24 Refrigeration - Not cooling Too cold Freeze up
25 Tires - Balance Leaks Cracked or cut Spare
26 Accident
Reflectors - Broken Missing Right Left
Safety Equipment* - Fuses Flares Flags Fire Extinguisher

Other problems _____

Checked in by: _____ Tested out by _____

Date _____ Date _____

[1] Explain if missing or used.

Form 12.–DAILY STOCK REPORT

Company _____

Date	Vehicle number	Repair Order number	Part number	Quantity issued	Mechanics initials

Daily Garage Report

This report is prepared by the Shop Foreman from Miscellaneous Shop Tickets turned in by the mechanics for work not covered by Repair Orders. The Daily Garage Report (form 13) is turned in to the Fleet Supervisor each morning for the previous day's activity.

Fleet Supervisor posts the miscellaneous costs to the monthly individual Motor Vehicle Cost Record and to the Truck History Folder.

The minor replacements made to each vehicle should be checked against the Daily Inspection/Trip Report which indicated the defect.

After posting, the Daily Garage Report may be destroyed or retained for a period of time depending on company policy.

Daily Fuel and Oil Report

When metered fuel pumps are used, individual Drivers will turn in their meter tickets with their Daily Inspection and Trip Reports. The Dispatcher will record each ticket on the Daily Fuel and Oil Report (form 14).

The Dispatcher also records the meter readings each morning as well as the ending readings upon completion of the day's activities.

Fleet Cost Control Report

This monthly consolidated report is submitted to the Traffic Manager by the Fleet Supervisor (form 15). Total operating costs for similar vehicles (retail, wholesale, tractor-trailers, and the like) are summarized for the current month, first and second previous months, and cumulative. These data are then compared to predetermined budgets. The variance is merely the difference between actual and budgeted amounts.

Other measures of performance may include miles traveled, cost per mile, units delivered, cost per unit delivered, and the like.

Monthly cost comparisons do not necessarily reflect how profitable a delivery service is to a given firm. The data reveal strong and weak points in the truck operations. Regular analysis pinpoints problems before they become excessive.

Information needed to compile this report is obtained from the individual Motor Vehicle Cost Records.

In addition a Fleet Cost Control Chart may be developed which summarizes vehicles by make or year within each particular group. In this way the Fleet Supervisor and Traffic Manager have at their fingertips a visual and continuous record of vehicle costs.

Form 13.–DAILY GARAGE REPORT

Company _____ Date: _____

Vehicle	Labor		Parts				
Number	Time	Cost	Qty.	Part No.	Description	Cost	Code
Total		$				$	

Form 14.–DAILY FUEL AND OIL REPORT

_____ ____, 19___
(month) (date) (year)

Company _____

Truck	Type of fuel		Oil	Trailer	Gasoline	Oil	Serviced by
	Diesel	Gasoline					
(Number)	(Gallons)	(Gallons)	(Quarts)	(Number)	(Gallons)	(Quarts)	(Initials)

DAILY REPORT OF OPERATIONS:

	Gas	Diesel		Gas	Diesel
Meter reading (Beginning)	_____	_____	Gallons brought forward	_____	_____
Meter reading (Ending)	_____	_____	Gallons purchased	_____	_____
Total gallons used	_____	_____	Total in tank	_____	_____
Gallons purchased	_____	_____		_____	_____
Actual gallons in tank	_____	_____		_____	_____

FORM–15. FLEET COST CONTROL REPORT

For month of _____ 19____

TYPE OF VEHICLE AND ITEM OF ANALYSIS	TOTAL VEHICLES	MILES	UNITS		NUMBER		PER UNIT COST	GRAND TOTAL FIXED, DIRECT AND INDIRECT COSTS	TOTAL FIXED COSTS	TOTAL DIRECT OPERATING COSTS	TOTAL INDIRECT OPERATING COSTS
			DELIVERED	BACKHAUL	TRIPS	STOPS					
	NUMBER		UNITS		NUMBER		DOLLARS				
A. RETAIL											
Total											
First previous (month)											
Second Previous (month)											
Year-to-date											
Budget											
Variance											
B. WHOLESALE											
Total											
First previous (month)											
Second previous (month)											
Year-to-date											
Budget											
Variance											
C. OVER-THE-ROAD POWER UNITS											
Total											
First previous (month)											
Second previous (month)											
Year-to-date											
Budget											
Variance											
D. TRAILERS											
Total											
First previous (month)											
Second previous (month)											
Year-to-date											
Budget											
Variance											

Signed _____
FLEET SUPERVISOR

Other Publications Available

Motortrucks Operated by Farmer Cooperatives, FCS Research Report 2. Thomas H. Camp and William M. Holroyd

Motortruck Operating Costs of Farmer Cooperatives, General Report 121. Thomas H. Camp

Costs and Practices of Selected Cooperatives in Operating Bulk-Feed Trucks, General Report 132. Thomas H. Camp

Piggyback Transportation for Pacific Northwest Cooperatives, General Report 86. William C. Bowser, Jr.

Owning or Leasing of Covered Hopper Cars by Farmer Cooperatives, General Report 144. Thomas H. Camp

Losses in Transporting and Handling Grain by Selected Grain Marketing Cooperatives, Marketing Research Report 766. Joseph E. Rickenbacker

Transportation Factors in Marketing Soybeans, Cottonseed, and Their Products: 16 Selected Cooperatives, General Report 145. William H. Thompson

Losses in Livestock in Transit in Midwestern and Western States, Marketing Research Report 247. Joseph E. Rickenbacker

Safety-Checking Livestock Trucking to Reduce Loss and Damage, Information 33. Joseph E. Rickenbacker

Safety-Checking Handling Practices to Reduce Livestock Losses, Information 45. Joseph E. Rickenbacker.

A copy of each of these publications may be obtained upon request while a supply is available from—

Farmer Cooperative Service
U.S. Department of Agriculture
Washington, D.C. 20250

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